(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
29 January 2004 (29.01.2004)

PCT

(10) International Publication Number
WO 2004/008976 A1

(51) International Patent Classification[7]: A61B 17/16

(21) International Application Number:
PCT/US2003/021967

(22) International Filing Date: 11 July 2003 (11.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/397,232 19 July 2002 (19.07.2002) US

(71) Applicant *(for all designated States except US)*: OSTEOTECH, INC. [US/US]; 51 James Way, Eatontown, NJ 07724 (US).

(71) Applicant *(for US only)*: MARTZ, Erik [US/US]; 11 Heritage Drive, Howell, NJ 07731 (US).

(72) Inventor; and
(75) Inventor/Applicant *(for US only)*: CHOW, David [US/US]; 10 Sulliman Road, Edison, NY 08817 (US).

(74) Agents: SQUIRE, William et al.; Carella, Byrne, Bain, Gilfillan, Cecchi, Stewart & Olstein, 6 Becker Farm Road, Roseland, NJ 07068 (US).

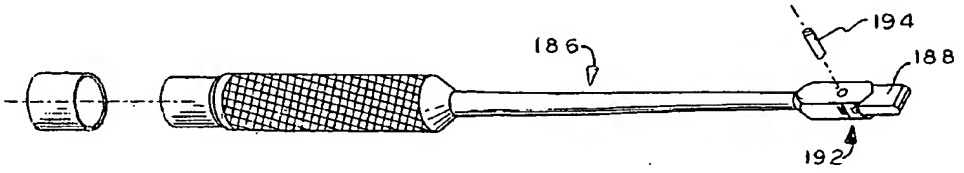
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CHISELS AND PROCEDURE FOR INSERTION OF SPINAL IMPLANT IN A SPINAL DISC SPACE



(57) Abstract: A chisel with U,V-shaped, saw tooth or other shaped opposing blades is used to form channels in adjacent vertebrae. The chisel has a projection extending from at least one of the top and bottom surfaces to limit depth of penetration into the vertebrae. A guide member may be attached to the forward tip of the chisel to guide the chisel into the disc space to uniformly chisel both adjacent vertebrae simultaneously to form a channel in the vertebrae. The so formed channels serve as a guide for a second chisel having no guide member. The second chisel, which may be a box chisel, is used to complete the channels to the desired depth to receive an associated implant, typically of cortical bone. Other embodiments are disclosed in which a two step box chisel has a retractable guide member for initially guiding the chisel as it forms partial channels in the vertebrae disc space. The guide member is then retracted and the channels formed to the desired depth. The chisels include guide member pins which serve to both limit the extension and retraction of the guide member and also to serve to limit the depth of penetration of the chisel, physically and visually. The guide member may be retracted with a rotatable knob and a threaded engaged rod or with an axially displaceable pin and rod assembly attached to the guide member. A procedure for using the chisels is also disclosed.

WO 2004/008976 A1